

REMARKS

Status of the Claims

Claims 2, 17-20, 22 and 23 are pending. Claim 2 has been amended. No new matter has been added. For instance, V and Nb are no longer optional. Further, the "S" value has been clarified. Lastly, as supported by paragraphs [0027], [0046] and [0047] of the present specification, certain precipitates have been recited in claim 2. Thus, no new matter has been added.

Reconsideration of this application, as amended, is respectfully requested.

Issues Under 35 U.S.C. § 112, 2nd Paragraph

Claims 2 and 23 stand rejected under 35 U.S.C. § 112, 2nd Paragraph, for the reasons recited at page 3 of the outstanding Office Action.

This rejection is respectfully traversed.

The Examiner has pointed out that independent claim 2, upon which claim 23 depends, indicates that the value for "S" is more than or equal to 0.10 seconds and less than or equal to 0.85 seconds. However, the Examiner asserts that this is unclear because if the value of "S" is 0.85 seconds, then the value range of expression 2 would be indefinite in claims 2 and 23 because the minimum value would be greater than the maximum value. In this regard, Applicants have amended claim 2 to address this particular issue. Applicants respectfully submit that the claims, as amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Issues under 35 U.S.C. §103(a)

Claims 2, 17-20 and 23 stand rejected under 35 U.S.C. § 103(a) as being obvious over the English machine translation of JP 2002-226914 (JP '914) in view of the English machine translation of JP 11-350075 (JP '075).

Further, claims 2, 17, 22 and 23 stand rejected under 35 U.S.C. § 103(a) as being obvious over WO 03/085149 (by use of the English equivalent US 2004/0187981 (US '981)).

Lastly, claims 2, 22 and 23 stand rejected under 35 U.S.C. § 103(a) as being obvious over JP '914 in view of US 6,086,685 (US '685).

These rejections are respectfully traversed.

Applicants note that the Examiner has found the amendments and arguments submitted to date to be unpersuasive.

Most recently, Applicants have argued that the prior art fails as a whole to suggest or disclose the claim upper limit of CPT2 of 0.70 (claim 2) or the new upper limit of CPT2 of 0.59 (new claim 23). However, the Examiner maintains that overlapping compositions within the claimed parameters are disclosed. Applicants disagree, but in order to expedite prosecution, the claims have been clarified.

In the present invention, as amended, the finish rolling is performed so as to precipitate V-carbide, V-nitride, V-carbonitride, Nb-carbide, and Nb-carbonitride in austenite structure in the rail during the finish rolling. Therefore, the growth of austenite grain can be inhibited.

In contrast, JP '914 teaches only V-carbide and Nb-carbide, etc., on precipitate in ferrite portion in pearlite structure (see paragraphs [0019] and [0020]). In other words, JP '914 fails to teach that finish rolling is performed so as to precipitate V-carbide, V-nitride, V-carbonitride, Nb-carbide, and Nb-carbonitride in austenite structure during finish rolling.

JP '075 relates to a pearlite rail. Therefore, JP '075 is silent as to precipitation in austenite structure during finish rolling.

US '981 only teaches that V-carbide and Nb-carbide, etc., form during cooling after hot rolling (see paragraphs [0098] and [0099]). In other words, US '981 does not teach that finish rolling is performed so as to precipitate V-carbide, V-nitride, V-carbonitride, Nb-carbide, and Nb-carbonitride in austenite structure during finish rolling.

Accordingly, the prior art fails as a whole to suggest or disclose the presently claimed subject matter. Thus, reconsideration and withdrawal of the above rejections are respectfully requested.

Conclusion


All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Craig A. McRobbie, Registration No. 42874 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized in this, concurrent, and future replies to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,

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